



U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

**62097-38**

Date of Issuance:

**03/18/2015**

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

**Unconditional**

Name of Pesticide Product:

**Refine™ 24.2L**

Name and Address of Registrant (include ZIP Code):

Fine Agrochemicals, Ltd  
c/o SciReg, Inc.  
12733 Director's Loop  
Woodbridge, VA 22192

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is unconditionally registered in accordance with FIFRA section 3(c)(5) provided that you:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Shaja B. Joyner, Product Manager 20  
Fungicide and Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Date:

**03/18/2015**

2. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 62097-38"
3. Submit one copy of the revised final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 01/14/2014

If you have any questions, please contact Driss Benmhend at (703) 308-9525 or [benmhend.driss@epa.gov](mailto:benmhend.driss@epa.gov).

Sincerely,



Shaja B. Joyner, Product Manager 20  
Fungicide and Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

# REFINE™ 24.2L

A hormone type product for thinning apples, citrus, olives, pears and for control of pre-harvest drop of apples and pears

**Active Ingredient:** 1-Naphthaleneacetic Acid, Potassium Salt\* ..... 24.2%  
**Other Ingredients:** ..... 75.8%  
**Total:** ..... 100.0%

\*Equivalent to 20.2% of 1-Naphthaleneacetic Acid or 830 grams (1.83 lbs) per gallon

## KEEP OUT OF REACH OF CHILDREN CAUTION

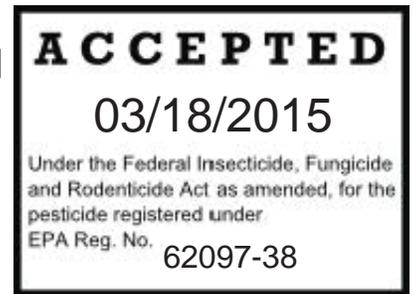
[See inside panel for First Aid Statements]

EPA Reg. No. 62097-

EPA Est. No.

Net Contents:

Batch No.:



<b>FIRST AID</b>	
<b>IF IN EYES</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-858-7378 (National Pesticide Information Center) for emergency medical treatment information, 6:30 AM to 4:30 PM Pacific time (PT), seven days a week.</p> <p>Note to Physician: No specific antidote is available. All treatments should be based on observed signs and symptoms of distress in the patient. Over exposure to materials other than this product may have occurred.</p>	

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION.** Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Wear long-sleeved shirt and long pants, shoes and socks.

### **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are made of any waterproof material. For more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

#### **Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material (except pilots)
- Shoes plus socks

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

### **USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### **ENVIRONMENTAL HAZARDS**

Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash waters or rinsate. Do not contaminate irrigation ditches or water used for irrigation or domestic purposes. Do not apply when weather conditions favor drift from treated areas. Do not use in a greenhouse.

### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labelling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow entry into treated areas during the restricted entry interval level (REI) of 48 hours unless wearing appropriate PPE.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as, plants, soil or water is:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or viton

### **DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labelling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirement specific to your state or tribe, consult the state or tribal agency responsible for pesticide regulation. Do not apply this product through any type of irrigation system.

### **PRODUCT INFORMATION**

Refine™ 24.2L is plant growth regulator for use in fruit production. The response of fruit trees to an application may vary depending on factors such as variety, climatic factors, tree vigor, etc. Users need to consider these factors before choosing the desired rate and timing for application. Always apply Refine™ 24.2L using sufficient water to ensure complete and uniform spray coverage. Application can be made in the range of 50-400 gallons of water per acre. The appropriate spray volume is determined by the type of equipment used, tree size and density of foliage. Consider all variables in rate and application timing for each variety and orchard location when establishing the spray program.

Refine™ 24.2L thins the fruit of apples and pears during heavy bearing years resulting in increased fruit size. The use of Refine™ 24.2L also promotes adequate return bloom the following season. Furthermore, an additional non-fruit thinning application may provide return bloom next year on certain apple varieties.

Refine™ 24.2L can also be used to control pre-harvest drop of apples and pears leading to a higher yields and a reduction of losses from factors such as windfall and knockdown.

Refine™ 24.2L, when diluted with the recommended amount of water, is physically compatible with a wide range of commonly used spray products. However, evaluating the full ranges of compatibilities under all conditions is impossible. Therefore, it is recommended that users premix a small quantity of a desired tank mix and observe for possible adverse changes (settling out, flocculation, etc.). Avoid mixtures of several materials and very concentrated spray mixtures. Observe all cautions and limitations on labeling of all products used in any tank mix. It is recommended that you consult your local Extension Pomologist for recommendations or when tank mixing any product you have not previously used

with Refine™ 24.2L. In addition, always test spray a small area prior to the general use of a tank mix that you have not previously used.

Do not apply when wind speeds are greater than 10 mph at the application site.

Specific use directions for orchard air blast applications:

- Sprays must be directed into the crop canopy.
- Turn off outward pointing nozzles at row ends and when spraying outer rows.
- For ground based applications and aerial applications, use only medium or coarser spray droplets (or nozzles) according to ASABE (S572) definition for standard nozzles.

For broadcast use, the maximum application rate is 0.11 lb per acre of 1-NAA equivalent for all uses except olive trees which may use up to 0.33 lb per acre of 1-NAA equivalent.

The maximum application rate per year or crop cycle is not to exceed 0.33 lb per acre of 1-NAA equivalent.

The minimum interval between applications is to be no less than 5 days.

**Table 1. Refine™ 24.2L spray preparation chart for dilute application.**

Note: All use of ppm refers to the active ingredient (a.i.) not the formulated product.

Rate (ppm)	Gallons of spray per acre			
	100	150	300	400
2	0.12 fl oz	0.18 fl oz	0.36 fl oz	0.48 fl oz
5	0.3 fl oz	0.45 fl oz	0.9 fl oz	1.2 fl oz
7.5	0.45 fl oz	0.68 fl oz	1.35 fl oz	1.8 fl oz
10	0.6 fl oz	0.9 fl oz	1.8 fl oz	2.4 fl oz
15	0.9 fl oz	1.35 fl oz	2.7 fl oz	3.6 fl oz
20	1.2 fl oz	1.8 fl oz	3.6 fl oz	4.8 fl oz

## APPLICATION INSTRUCTIONS

### **Chemical Thinning - Apples:**

Due to differences in varieties, climatic factors before and after application, tree vigor and fruit set and fruit size at time of application, the application rates can range from 2-20 ppm (see Table 1) and application timing can range from full bloom petal fall to 30 days after full bloom. Limit higher concentrations to vigorous trees with high fruit set potential. Reduced concentrations are recommended on weaker, less vigorous trees with lower fruit set potential.

Use 2-5 ppm when a surfactant (wetting agent) is added. Use surfactant (wetting agent) according to manufacturer's recommendations, but not more than 1 pint per 100 gallons of spray. Treat mid-season to late blooming varieties such as Red Delicious, Golden Delicious, Fuji, Gala, Granny Smith and Romes 5-21 days after

full bloom depending on locality and other factors. For concentrate spray, use Refine™ 24.2L at the rate of 0.5 fl oz-1.0 fl oz per acre. Application in sufficient water for uniform and even distribution of the spray is imperative.

Thinning sprays are most effective when the king apple fruitlets are between 5-10 mm in diameter. During cool springs, delay application as necessary until the largest fruits are 7-10 mm in diameter and forecasted daytime temperatures are likely to rise above 60°F within the next 5 days. The preferred application temperature is between 70°F and 75°F. Applications are not recommended below 60°F or above 80°F. When daytime temperatures exceed 85°F, over-thinning may occur. Good thinning can be obtained under the latter conditions with lower rates of chemicals.

Tank mix combinations of Refine™ 24.2L applied at concentrations between 5 and 7.5 ppm plus Carbaryl have been shown to effectively thin early maturing, heavy-setting varieties as well as hard-to-thin apple varieties. A petal fall application of Refine™ 24.2L followed 7-10 days later by an application of Refine™ 24.2L (5-7.5 ppm) + Carbaryl (0.5 lbs ai/100 gals) has improved thinning of hard-to-thin apple varieties. Do not mix Refine™ 24.2L with any product containing a label restriction against such mixing. Always apply in accordance with the limitations and precautions of the most restrictive label.

**Do not use Refine™ 24.2L on early season varieties (those that ripen before Macintosh) such as Yellow Transparent, Early Williams Red and Oldenburg; since severe injury or over-thinning may occur.**

**Chemical thinning - pears (Bartlett, Bosc and Comice):**

Apply Refine™ 24.2L at a spray concentration of between 10-15 ppm for dilute spray in up to 400 gallons of water per acre or at a rate of 2-3 fl oz of product per acre for concentrated spray (0.6 fl oz of Refine™ 24.2L in 100 gallons makes 10 ppm of spray solution). Apply Refine™ 24.2L once per year 15-28 days after full bloom with a labeled surfactant (wetting agent). Always apply Refine™ 24.2L using sufficient water to ensure complete and uniform spray coverage. Refine™ 24.2L may not adequately thin Bartlett pears in some seasons. The preferred application temperature is between 70°F and 75°F. Application is not recommended below 60°F or above 80°F

**Chemical thinning - olives:**

Spray Refine™ 24.2L when young fruits are  $\frac{1}{8}$  to  $\frac{3}{16}$  inch in diameter or 12-18 days after full bloom. Proper application timing is critical. Thinning is effective on all varieties except Sevillano. **Do not apply during bloom unless complete removal of fruit is desired.** Apply a solution of 120 ppm by adding 7.2 fl oz of Refine™ 24.2L and a labeled surfactant (wetting agent) to 100 gallons of water 12 days after full bloom. Adjust the spray concentration upward by 10 ppm for each day following full bloom during the thinning period. Severe over-thinning may result from application to trees during hot and dry conditions.

**Chemical thinning - oranges, tangerines (mandarins), tangelos and tangors:**

Spray at the rate of 100-500 ppm (6 fl oz per 100 gallons water equals 100 ppm). The degree of thinning obtained with Refine™ 24.2L is variable and highly dependent on temperature. Severe over-thinning may result from application to trees during hot, arid dry conditions. **Do not apply Refine™ 24.2L to "non-thrifty" trees.** Users must determine a suitable concentration and time of application for specific cultivars and location. Concentration in the 100-150 ppm ranges are recommended with applications being made when the fruits are in an early stage of development (5-20 mm in diameter) and near the normal period of "June drop" (in Florida the period of natural drop occurs in May). Expect higher thinning activity during hot weather. Therefore, use lower concentrations during hot weather (85°F-95°F). The effectiveness of Refine™ 24.2L lessens at temperatures below 85°F. Ensure the entire fruiting area of the tree receives thorough coverage of the spray solution. Do not apply more than 1 application of Refine™ 24.2L per year. Do not use on trees where both young and mature fruit are present. Do not apply within 150 days of harvest.

**Control of pre-harvest drop - apples:**

Apply Refine™ 24.2L at 7-14 days prior to harvest. Application timing is dependent on the maturation of the crop, requiring that separate sprays be applied to early and late maturing varieties. Do not make more than two applications of Refine™ 24.2L per season, and do not delay picking beyond optimum maturity. Do not spray within 2 days of harvest. Refine™ 24.2L is effective in 3-4 days after application and controls drop for 2 weeks.

**Ground application:** Use 2-8 fl oz of Refine™ 24.2L per acre in sufficient water to ensure good coverage.

**Aerial application:** Use 2-8 fl oz in at least 5 gallons of water per acre. Utilize aircraft spray equipment that gives thorough coverage to all portions of the tree canopy. Apply Refine™ 24.2L only when weather conditions favor minimal spray drift. Use lower rates for normal foliage and fruiting. For dense foliage and heavy fruiting, higher rates may be necessary. Do not apply within 2 days of harvest.

**Control of pre-harvest drop - pears (Bartlett, Bosc and D'Anjou):**

Apply Refine™ 24.2L to pears 5-7 days prior to harvest. Application timing is dependent on the maturation of the crop, requiring that separate sprays be applied to early and late maturing varieties. Do not make more than 2 applications and do not delay picking beyond optimum maturity. Refine™ 24.2L is effective in 3-4 days after application and controls drop for 2 weeks. Do not apply within 2 days of harvest.

**Ground application:** Use 2-8 fl oz of Refine™ 24.2L (12.5-50 grams of active ingredient) per acre in sufficient water to ensure good coverage. When Bartlett and Bosc are inter-planted, spray only once per season, use a maximum of 4-8 fl oz of product per acre per season on Bartlett to prevent premature ripening.

**Aerial application:** Use 2-8 fl oz in at least 5 gallons of water per acre. Utilize aircraft spray equipment that gives thorough coverage to all portions of the tree canopy. Apply Refine™ 24.2L only when weather conditions favor minimal spray drift. Use lower rates for normal foliage and fruiting. For dense foliage and heavy fruiting, higher rates may be necessary. Do not apply within 2 days of harvest.

**Preserving ornamental holly boughs:**

To delay leaf drop of holly boughs, make a "dip solution" containing 2-4 fl oz in 100 gallons of water (equal to 33-66 ppm). Dip holly boughs in the treated solution immediately after cutting. Allow excess solution to drain from boughs. Do not soak or leave boughs in dip solution. Replenish dip solution as needed. To maintain the effectiveness of Refine™ 24.2L, mix and use a new solution every 3-4 days.

**Refine™ 24.2L compatibility with other products:**

Refine™ 24.2L is compatible with a wide range of pesticides. Field test the mixture on a small scale to insure the product performance and plant safety before large-scale field use. Observe all precautions and limitations on labeling of all products used in mixtures. **DO NOT APPLY TANK MIX COMBINATIONS UNLESS YOUR PREVIOUS EXPERIENCE INDICATES THE MIXTURE IS EFFECTIVE AND WILL NOT RESULT IN APPLICATION PROBLEMS OR PLANT INJURY.**

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage or disposal.

**PESTICIDE STORAGE:** Keep container tightly closed when not in use. Store in a cool, dry place. Protect from temperatures below 32°F. This product may freeze. If freezing should occur, thaw and shake gently to unify the product. Do not store diluted product.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

*[[for container size 5 gallons or less]* **CONTAINER HANDLING:** Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, if available, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.]

*[[for container size greater than 5 gallons]* **CONTAINER HANDLING:** Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank, or store

rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, if available, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.]

#### **WARRANTY DISCLAIMER AND LIMITATION OF LIABILITY**

Fine Agrochemicals Limited ("FINE") warrants that this Product conforms to the specifications on this label. To the extent consistent with applicable law, FINE makes no other warranties and disclaims all other warranties, express or implied, including but not limited to warranties of merchantability and fitness for a particular purpose. No agent of FINE or any other person is authorized to make any representation or warranty beyond those contained herein.

It is impossible to eliminate all risks associated with this Product. Plant injury, lack of performance, or other unintended consequences may result because of factors such as abnormal weather conditions, use of the Product other than in strict accordance with this label's instructions, presence of other materials, the manner of application or other factors, all of which are beyond the control of FINE or the seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

To the extent consistent with applicable law: 1) FINE disclaims any liability whatsoever for special, incidental or consequential damages resulting from the handling or use of this Product and 2) FINE's liability under this label shall be limited to the amount of the purchase price or, at the election of FINE, the free replacement of the Product.

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